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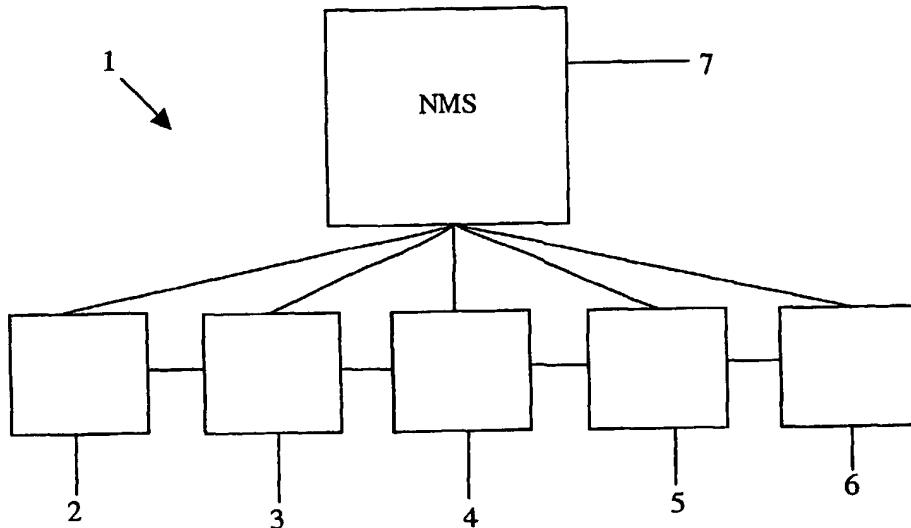
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(54) Title: MONITORING TELECOMMUNICATION NETWORK ELEMENTS



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(57) Abstract: A method of monitoring the status of one or more network elements (NEs) (2 to 6) linked together in a telecommunication network (1), comprising receiving a down status notification from a NE in the network (1), identifying one or more other NEs which are linked to the NE, polling the or each other NE to determine the status thereof. The status of a NE may be operational i.e. up, or non-operational i.e. down. A down status notification may be received from a NE if the NE determines that the status of any other NE linked thereto is down. The down status notification may contain information on the NE which has output the notification. Identifying the or each other NE may comprise accessing the down status notification to obtain information on the NE which has output the notification, and using the information to obtain the identification of the or each other NE. Polling the or each other NE may comprise sending at least one SNMP get request to the NE. The method may be carried out using a network management system (NMS) (7) of the network (1).



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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 261 044 A (DEV ROGER H ET AL) 9 November 1993 (1993-11-09) * Abstract * column 2, line 53 -column 6, line 25 column 7, line 25 -column 11, line 61 ---	1-43
X	US 5 991 264 A (CROSLIN WILLIAM D) 23 November 1999 (1999-11-23) * Abstract * column 1, line 65 -column 5, line 6; figure 4 column 6, line 50 -column 10, line 39 ---	1-43
X	US 6 199 172 B1 (ARSENAULT MICHAEL ET AL) 6 March 2001 (2001-03-06) column 1, line 37 -column 4, line 35; figures 2,3 column 6, line 4 -column 7, line 8 -----	1-43

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5261044	A	09-11-1993		AT 154850 T AT 194237 T AT 194238 T AU 681972 B2 AU 2722595 A AU 682272 B2 AU 685335 B2 AU 4063295 A AU 659101 B2 AU 8620491 A DE 69126666 D1 DE 69126666 T2 DE 69132279 D1 DE 69132279 T2 DE 69132280 D1 DE 69132280 T2 EP 0549677 A1 EP 0737920 A2 EP 0737921 A2 JP 6501118 T WO 9205485 A2 US 5295244 A US 6049828 A US 5504921 A US 5559955 A US 6374293 B1 US 5751933 A US 5727157 A US 5436909 A US 5812750 A		15-07-1997 15-07-2000 15-07-2000 11-09-1997 21-09-1995 25-09-1997 15-01-1998 04-04-1996 11-05-1995 15-04-1992 31-07-1997 12-02-1998 03-08-2000 18-01-2001 03-08-2000 18-01-2001 07-07-1993 16-10-1996 16-10-1996 27-01-1994 02-04-1992 15-03-1994 11-04-2000 02-04-1996 24-09-1996 16-04-2002 12-05-1998 10-03-1998 25-07-1995 22-09-1998
US 5991264	A	23-11-1999		NONE		
US 6199172	B1	06-03-2001		AU 700018 B2 AU 2263597 A EP 0879517 A1 WO 9729570 A1 US 2001052085 A1		17-12-1998 28-08-1997 25-11-1998 14-08-1997 13-12-2001